

# Audit

# Report



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**UNACCOMPANIED ENLISTED PERSONNEL HOUSING  
REQUIREMENTS FOR FORT LEWIS, WASHINGTON**

Report No. 98-137

May 26, 1998

Office of the Inspector General  
Department of Defense

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### **Acronyms**

ASIP	Army Stationing and Installation Plan
BAQ	Basic Allowance for Quarters
BEQ	Bachelor Enlisted Quarters
DEERS	Defense Enrollment and Eligibility Reporting System
DFAS	Defense Finance and Accounting Service
DMDC	Defense Manpower Data Center
RPLANS	Real Property Planning and Analysis System
MILCON	Military Construction
UPH	Unaccompanied Personnel Housing



INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
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ARLINGTON, VIRGINIA 22202

May 26, 1998

MEMORANDUM FOR AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Audit Report on Unaccompanied Enlisted Personnel Housing Requirements  
for Fort Lewis, Washington (Report No. 98-137)

We are providing this report for review and comment. We considered management comments on a draft of this report when preparing the final report. This report is one in a series about DoD unaccompanied enlisted personnel housing requirements.

DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. The Department of the Army comments were not considered responsive. We request additional comments on the recommendations by July 28, 1998.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Wayne K. Million, at (703) 604-9312 (DSN 664-9312) or Mr. Gary R. Padgett, at (703) 604-9243 (DSN 664-9243). See Appendix E for the report distribution. The audit team members are listed inside the back cover.

A handwritten signature in black ink, reading "Robert J. Lieberman", is positioned above the typed name.

Robert J Lieberman  
Assistant Inspector General  
for Auditing

## **Office of the Inspector General, DoD**

**Report No. 98-137**  
(Project No. 6CG-0072.07)

**May 26, 1998**

### **Unaccompanied Enlisted Personnel Housing Requirements for Fort Lewis, Washington**

#### **Executive Summary**

**Introduction.** This report is one in a series that discusses the process used to determine requirements to support the construction of new unaccompanied enlisted personnel housing (barracks). The Secretary of Defense has established a new standard design criterion for future barracks construction. The Military Departments have estimated a cost of \$15.4 billion to replace existing barracks over a 30-year period to meet new standards. In FY 1997, Fort Lewis, Washington, reported a total requirement of 5,390 barracks spaces, including 1,142 adequate barracks spaces, 600 barracks spaces approved for two construction projects, and a deficit of 3,648 barracks spaces.

**Audit Objectives.** The overall audit objective was to determine the validity of requirements estimated for DoD unaccompanied personnel housing. This report provides the results of the audit of unaccompanied enlisted personnel housing requirements for Fort Lewis. Audit objectives announced, but not included in this report, will be addressed in a future summary report.

**Audit Results.** The Army underestimated the Fort Lewis requirement for unaccompanied permanent party enlisted personnel by 471 barracks spaces. Factors used in the requirements determination process were not an accurate representation of the unaccompanied permanent party personnel requiring housing. As a result, future construction requirements for Fort Lewis have been understated by \$31.6 million for the barracks replacement program. For details of the audit results, see Part I.

**Summary of Recommendations.** We recommend that the Assistant Chief of Staff for Installation Management, Department of the Army, recompute permanent party barracks requirements for Fort Lewis. Specifically, in computing the requirements, the Army should use closest dependent for basic allowance for quarters codes (BAQ dependent codes) to compute bachelor factors. We also recommend the use of BAQ dependent codes to compute bachelor factor percentages that are used in the requirements determination process for all Army installations. We further recommend that the Army request the Defense Finance and Accounting Service, Indianapolis provide BAQ dependent codes for all Army personnel from monthly payroll data that is provided to the Defense Manpower Data Center. Finally, we recommend that the Army obtain BAQ dependent codes from the Defense Manpower Data Center for computing bachelor factor percentages for Army installations.

**Management Comments.** The Assistant Chief of Staff for Installation Management, Department of the Army, nonconcurred with Recommendations 1 through 4. The Assistant Chief of Staff believes that the report does not present a convincing argument in favor of the recommendation to use Defense Finance and Accounting Service data in lieu of Defense Enrollment and Eligibility Reporting System data for the computation of

unaccompanied enlisted personnel barracks requirements. The Assistant Chief of Staff stated that the only problem with Defense Enrollment and Eligibility Reporting System was that it included all service members within a 40-mile radius. However, this condition was previously reported in Army Audit Agency Report AA 98-59, "Unaccompanied Enlisted Personnel Housing Program," December 29, 1997. Based on the Army Audit Agency report, the contractor responsible for computing barracks requirements for permanent party soldiers (R&K Engineering) has revised the computation of determination data. Management also stated that the comparison of Defense Finance and Accounting Service data and Defense Enrollment and Eligibility Reporting System data may be inconclusive since the dates of the data were different. Also, it is arguable that the scope of the audit, one installation, would provide an adequate basis for the conclusion and recommendation to change the entire methodology. See Part I for a discussion of management comments and Part III for the complete text of management comments

**Audit Response.** The Assistant Chief of Staff for Installation Management comments are not responsive. The corrective actions taken by the Army will not ensure that barracks requirements for unaccompanied permanent party enlisted personnel are computed correctly. The use of zip codes will not identify all soldiers or always reflect where the soldier's actual duty station is located. Also, in the case of a single soldier with dependents, there is currently no differentiation made as to whether the soldier is with or without custody of the dependent. Failure to recognize single soldiers without dependents in their custody understates the bachelor factor used in the barracks requirements determination process, and the number of barracks spaces required by an installation. Additionally, since the Army uses the same data and process to compute barracks requirements for all Army installations, we believe that our observation of Fort Lewis is representative Army wide. Therefore, we request that the Assistant Chief of Staff for Installation Management reconsider the Army position on Recommendations 1 through 4, and provide additional comments in response to the final report.

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## **Part I - Audit Results**

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## Audit Background

In November 1995, the Secretary of Defense signed a memorandum for the Secretaries of the Military Departments for design and construction of unaccompanied enlisted personnel housing (barracks). The memorandum established a new standard design criterion for future permanent party barracks construction. The memorandum challenged each Military Department to implement the new standard as part of an integrated barracks plan that considers optimal use of existing adequate quarters and renovation of quarters that can be made adequate. The plan encouraged use of traditional military construction and innovative use of private sector solutions. The Military Departments have estimated a cost of \$15.4 billion to replace existing barracks over a 30-year period using the new standard. The determination process identifies barracks space deficits that result in construction under the replacement program. Appendix C provides additional background information for the new barracks construction standard and the Military Departments' barracks replacement programs.

**Policy Guidance.** DoD Manual 4165.63-M, "DoD Housing Management," September 1993, establishes policy guidance, procedures, and responsibilities on all matters associated with barracks housing. The manual regards permanent party and transient personnel categories separately because justification requirements differ. Permanent party personnel are:

- personnel permanently assigned to an installation, and
- students assigned to courses of 20 or more weeks.

Barracks programming considers the housing requirements of all assigned unaccompanied permanent party personnel (both on-/off-post), that are eligible for barracks space. Those members excluded from programming are assigned duty in CONUS, Alaska, or Hawaii. They would be eligible for family housing if they had not elected to be unaccompanied by dependents for reasons other than availability of housing at the permanent duty location. Projected deficits establish the baseline for new construction programming or other acquisitions. A deficit (or surplus) is determined by identifying and comparing projected requirements and assets. Military Departments use long-range personnel strength data from planning documents to support permanent party barracks construction. Support for transient personnel barracks is determined by averaging the daily number of temporary duty and other transient personnel eligible for temporary duty quarters on a confirmed reservation basis.

Army Regulation 210-50, "Housing Management," April 21, 1990, outlines the policies, procedures, and responsibilities for determining barracks space requirements. The regulation states that unaccompanied personnel housing construction requirements are to be based on strength projections from the Army Stationing and Installation Plan (ASIP) or equivalent Department of the Army documentation. Also, the construction requirements will be reviewed against occupancy data reflected in the latest DD Form 2085, "Unaccompanied Personnel Housing (UPH) Inventory and Utilization Data" and inventory data reflected in real property inventory records. To ensure consistency and accuracy, the Army uses the Real Property Planning and Analysis System (RPLANS) to determine barracks requirements.



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## **Audit Objectives**

The overall audit objective was to determine the validity of requirements estimated for DoD unaccompanied personnel housing. A specific objective was to determine whether barracks requirements and cost estimates developed by the Military Departments were supported with appropriate documentation. We also announced an objective to review the management control program as it applies to the other stated objectives.

This report provides the results of the audit of barracks requirements for unaccompanied enlisted personnel located at Fort Lewis, Washington. The management control program will be discussed in a future summary report. See Appendix A for a discussion of the scope and methodology, and Appendix B for a summary of prior coverage related to the audit objectives.

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## **Barracks Requirements for Unaccompanied Permanent Party Enlisted Personnel**

The Army underestimated the Fort Lewis requirement for unaccompanied permanent party enlisted barracks by 471 barracks spaces. The underestimate occurred because bachelor factors used by the Army in the requirements computation process were not an accurate representation of the unaccompanied permanent party personnel requiring barracks space. As a result, future construction requirements for the Fort Lewis barracks replacement program have been understated by \$31.6 million.

### **Deficit Calculation**

DoD Manual 4165.63-M, requires that barracks projects for new construction, repair, improvement, major renovation, and replacement of existing barracks be supported with requirements, asset, and deficit data. Army Regulation 210-50, "Housing Management" provides guidelines for barracks standards, and instructions on computing barracks requirements. The Army regulation identifies three categories of personnel requiring separate justifications for barracks requirements.

- **Permanent Party Enlisted Personnel.** Personnel permanently assigned to an installation and students attending training, whose course of instruction is 20 weeks or more.
- **Trainees.** Personnel attending initial entry training, including one station unit training.
- **Transients.** Personnel in temporary duty status and students attending advanced individual training, whose course of instruction is less than 20 weeks.

The Army uses a centralized approach to consistently identify barracks requirements for each of the three barracks categories. RPLANS is the integrated computer support system that provides data for the Army computation process for barracks requirements. For unaccompanied permanent party enlisted personnel, the Army computes requirements for grades E-6 and below at installations with unaccompanied permanent party enlisted personnel requirements of 100 or more barracks spaces. Also, the Army's unaccompanied permanent party barracks requirements computation presumes that 50 percent of E-6 personnel live off post in adequate housing.

**Permanent Party Barracks Requirements.** The effective permanent party barracks requirement is defined as the number of assigned unaccompanied permanent party personnel entitled to barracks space. To calculate the effective permanent party barracks requirements, the Army integrates existing facility data and determines the number of personnel expected to be assigned to the post 6 years into the future. At this point, a grade distribution and bachelor factor is

## **Barracks Requirements for Unaccompanied Permanent Party Enlisted Personnel**

applied to determine the number of unaccompanied permanent party personnel requiring barracks space. The number of unaccompanied permanent party personnel requiring barracks space is multiplied by the number of spaces each grade is authorized to determine the total space requirements. The Army compares the gross barracks space requirements with barracks assets to determine the deficit or surplus.

**Permanent Party Personnel.** The term "permanent party personnel" is defined as the total number of host and tenant personnel reported on the ASIP that are programmed to be assigned to the installation. The Army relies on the ASIP to determine its long-range planning numbers. The ASIP reports an installation's personnel strength data 6 years into the future.

**Grade Distribution.** The percentage of personnel by grade for each programmed unit reported in the ASIP is obtained from the Facility Planning System. The ASIP reports total personnel strength for each programmed unit. Therefore, the grade distribution is applied to a unit's total personnel strength reported in the ASIP in order to determine the total personnel by grade.

**Bachelor Factors.** A bachelor factor is expressed as the percentage of single personnel without dependents in each grade. The percentage is determined by dividing single personnel without dependents in each grade by the personnel in each grade. Another element includes the single parents without custody of dependents. The Army uses data reported in the installation's Defense Enrollment Eligibility Reporting System (DEERS) to calculate the bachelor factor for grades E-1 through E-4, E-5, and E-6. The DEERS report identifies personnel, marital status, number of dependents and quarters allowance, if received.

**Entitled Barracks Spaces.** An entitled barracks space equates to an adequate minimum space standard based on grade. The Army reported barracks spaces based on the new 1 + 1 construction standard (for example, the minimum space standard for grades E-1 through E-4 is 118 square feet). Table 1 shows barracks space entitlements for each grade.

<b>Table 1. Barracks Space Entitlements</b>	
<u>Grade</u>	<u>Entitled Barracks Space</u>
E-1 to E-4	1 (118 sq. ft.)
E-5	2 (236 sq. ft.)
E-6	2 (236 sq. ft.)

**Barracks Assets.** A post commander has two sources of housing assets to satisfy barracks requirements: on post, and local housing near the post, except in high-cost, remote and overseas locations. Personnel in grades E-7 and above are normally considered to be adequately housed. Also, 50 percent of E-6 personnel are presumed to live off post in adequate housing.

## Barracks Requirements for Unaccompanied Permanent Party Enlisted Personnel

### Requirements for Unaccompanied Permanent Party Enlisted Personnel

As of July 8, 1997, the Army reported that 5,390 barracks spaces were required by 4,895 unaccompanied permanent party enlisted personnel programmed for Fort Lewis. The current on-/off-post inventory reported 1,142 adequate barracks spaces. Also reported were two approved military construction projects for 600 barracks spaces. The total barracks deficit was 3,648 barracks spaces. Our review of the Army's data used to compute barracks requirements showed that inaccurate bachelor factors were used to identify the number of personnel requiring permanent party barracks spaces. Failure to use bachelor factors that accurately reflect personnel requiring barracks space resulted in an underestimate of requirements by 364 personnel representing 471 barracks spaces. The current inventory of adequate and reported barracks spaces for approved construction was supported.

**Fort Lewis Bachelor Factors.** The 4,895 personnel reported as unaccompanied permanent party enlisted personnel requiring barracks space did not include all permanent party personnel. Table 2 shows a grade distribution of the total number of Fort Lewis permanent party personnel reported by the Army.

**Table 2. Fort Lewis Data**

<u>Grade</u>	<u>Number of Permanent Party Personnel</u>
E-1 to E-4	8,482
E-5	3,154
E-6	<u>1,892</u>
<b>Total</b>	<b>13,528</b>

We verified the total number of permanent party personnel the Army used in the requirements determination process with the ASIP data to ensure that the data was correct. Also, we evaluated the bachelor factors used in the determination process to ensure that the factors accurately reflected the percentage of personnel requiring barracks space. As a result, we determined that the bachelor factors the Army used did not accurately reflect the percentage of personnel requiring barracks spaces. The Army used the DEERS report dated March 31, 1996 to identify the percentage of personnel at the installation authorized barracks space. However, the DEERS data included service members within a 40-mile radius of the installation that were not housed on Fort Lewis. For example, the 40-mile radius for Fort Lewis included Air Force personnel assigned to McChord Air Force Base. The Air Force figures should not have been included in the computations for barracks space. Also, DEERS data provided for soldiers who are divorced or whose marriage has been annulled and have dependents does not indicate whether the soldier has custody of the dependent. The Army's barracks computation process assumes that a soldier with dependent is married. However, if the soldier has a dependent based on a court order and does not have custody of the dependent, then the soldier is considered single for barracks computation purposes and is entitled to a barracks space.

## **Barracks Requirements for Unaccompanied Permanent Party Enlisted Personnel**

We determined bachelor factors for Fort Lewis from data provided by the Defense Finance and Accounting Service (DFAS), Indianapolis. Closest dependent for basic allowance for quarters codes (BAQ dependent codes) were obtained for 14,694 personnel assigned to units for which Fort Lewis has responsibility to provide barrack space. Each military member has a BAQ dependent code in their military pay record to show the status of the closest dependent that entitles the member to draw BAQ. For example, Code A means that the member is entitled to draw BAQ because the member has a spouse as a dependent. Appendix D lists the BAQ dependent codes used by DFAS-Indianapolis. For barracks computation purposes, we considered personnel with only the following BAQ dependent codes to be members entitled to barracks space:

- B - Child in legal custody of someone else
- G - Grandfather clause (court ordered dependent prior to December 5, 1991); child in legal custody of some one else
- R- Own Right (BAQ without rate)

We verified BAQ dependent codes with support contained in personnel records. Our review of BAQ dependent codes and military personnel records for 416 personnel showed that all 416 codes were properly supported. Bachelor factor percentages were then computed for grades E-1 through E-4, E-5 and E-6 by dividing the total number of personnel drawing BAQ with the dependent codes B, G and R by the total population for each grade. The bachelor factor percentages for Fort Lewis increased because the Army computations used DEERS data that included personnel from other services with lower bachelor factors than Army personnel assigned to Fort Lewis. Table 3 shows the bachelor factors computed by the Army and Inspector General (IG), DoD.

**Table 3. Bachelor Factors Data<sup>1</sup>**

<u>Grade</u>	<u>Bachelor Factor Per IG DoD</u>	<u>Bachelor Factor Per Army</u>	<u>Difference</u>
E-1 to E-4	52.3	50.1	2.2
E-5	19.1	15.7	3.4
E-6	11.7	7.9	3.8

<sup>1</sup>Bachelor factors are expressed as a percent.

Failure to use the correct bachelor factor percentages has understated permanent party barracks requirements for 364 personnel representing 471 barracks spaces. Table 4 shows the computation of underestimated unaccompanied permanent party personnel and barracks spaces that resulted from the use of inaccurate bachelor factors in the Army's requirements determination process.

## Barracks Requirements for Unaccompanied Permanent Party Enlisted Personnel

**Table 4. Calculation of Underestimated Unaccompanied Permanent Party Personnel and Barracks Spaces<sup>1</sup>**

<u>Grade</u>	<u>Permanent Party Personnel Per IG DoD<sup>2</sup></u>	<u>Permanent Party Personnel Per Army<sup>3</sup></u>	<u>Difference</u>	<u>Barracks Spaces Per Person</u>	<u>Total Barracks Spaces<sup>4</sup></u>
E-1 to E-4	4,436	4,250	186	1	186
E-5	602	495	107	2	214
E-6	221	150	<u>71</u>	2	<u>71</u>
<b>Total</b>			<b>364</b>		<b>471</b>

<sup>1</sup>Barracks space for each grade is computed as follows: (number of unaccompanied permanent party personnel per IG DoD) - (number of unaccompanied permanent party personnel per Army) = (number of unreported unaccompanied permanent party personnel) x (barracks space per person) = (total barracks spaces) by grade.

<sup>2</sup>Data was computed using a total permanent party population of 13,528 and multiplying the data by the bachelor factor for each grade reported in Table 3 for the IG DoD.

<sup>3</sup>Data was computed using a total permanent party population of 13,528 and multiplying the data by the bachelor factor for each grade reported in Table 3 for the Army.

<sup>4</sup>Barracks requirements for E-6 personnel are reduced by 50 percent.

We believe that the Army's requirements determination process can be greatly enhanced by using BAQ dependent codes to compute bachelor factors. DFAS-Indianapolis provides payroll data for all Army personnel to the Defense Manpower Data Center (DMDC) on a monthly basis. The payroll data currently being provided to DMDC does not include all BAQ dependent codes. However, if DFAS-Indianapolis provided all BAQ dependent codes to DMDC for the total Army population, then the Army could readily obtain the data and compute bachelor factors for all Army installations.

## **Cost of Underestimate**

The Army has underestimated its barracks replacement construction requirements at Fort Lewis by \$31.6 million. The estimated average cost to construct a barracks space at Fort Lewis is \$67,000. The use of accurate bachelor factor percentages in the requirements determination process adds 471 barracks spaces to the permanent party barracks requirements.

## **Barracks Requirements for Unaccompanied Permanent Party Enlisted Personnel**

### **Summary**

The Army underestimated the barracks requirements for unaccompanied permanent party enlisted personnel at Fort Lewis. The understatement occurred because factors used in the requirements determination process to identify personnel entitled to barracks space were flawed. Better information is available.

Accurate identification of personnel entitled to barracks space is an essential part of the barracks requirements determination process. The Army's barracks replacement program focuses on reducing the barracks deficit. The Army's deficit of 3,648 permanent party barracks spaces at Fort Lewis needs to be increased to 4,119 barracks spaces by adding 471 barracks spaces.

Proper identification of personnel requiring permanent party barracks space is needed to ensure that future barracks construction projects are planned to meet accurately identified and authorized requirements.

### **Recommendations, Management Comments, and Audit Response**

We recommend the Assistant Chief of Staff for Installation Management, Department of the Army:

1. Recompute barracks requirements for unaccompanied permanent party enlisted personnel for Fort Lewis. Specifically, in computing the requirements, the Army should use closest dependent for basic allowance for quarters codes to determine bachelor factor percentages.
2. Use closest dependent for basic allowance for quarters codes to compute bachelor factor percentages that are used for all Army installations.
3. Request Defense Finance and Accounting Service, Indianapolis to provide closest dependent for basic allowance for quarters codes for all Army personnel from monthly payroll data that is provided to Defense Manpower Data Center.
4. Obtain closest dependent for basic allowance for quarters codes from Defense Manpower Data Center for computing bachelor factor percentages for Army installations.

**Management Comments.** The Assistant Chief of Staff for Installation Management, Department of the Army, nonconcurred with Recommendations 1 through 4. The Assistant Chief of Staff believes that the report does not present a convincing argument in favor of the recommendation to use Defense Finance and Accounting Service data in lieu of Defense Enrollment and Eligibility Reporting System data for the computation of unaccompanied enlisted personnel barracks requirements. The Assistant Chief of Staff stated that the only problem with Defense Enrollment and Eligibility Reporting System was that it included all

## **Barracks Requirements for Unaccompanied Permanent Party Enlisted Personnel**

service members within a 40-mile radius. However, this condition was previously reported in Army Audit Agency Report AA 98-59, "Unaccompanied Enlisted Personnel Housing Program," December 29, 1997. Based on the Army Audit Agency report, the contractor responsible for computing barracks requirements for permanent party soldiers (R&K Engineering) has revised the computation of determination data. Management also stated that the comparison of Defense Finance and Accounting Service data and Defense Enrollment and Eligibility Reporting System data may be inconclusive since the dates of the data were different. Also, it is arguable that the scope of the audit, one installation, would provide an adequate basis for the conclusion and recommendation to change the entire methodology.

**Audit Response.** The Assistant Chief of Staff for Installation Management comments are not responsive. Although the condition identified in our report was previously identified, the corrective actions taken by the Army will not ensure that barracks requirements for unaccompanied permanent party enlisted personnel are computed correctly. The contractor responsible for computing barracks requirements (R&K Engineering) now computes the bachelor factor for a given installation by using zip codes to identify soldiers for whom marital and dependency data are obtained from the Defense Enrollment and Eligibility Reporting System. This action should identify soldiers actually assigned to an installation. However, during our review of Fort Lewis, we found that a zip code reported for a soldier's duty station identified in the Fort Lewis Army Stationing and Installation Plan does not always reflect where the soldier's actual duty station is located.

In a discussion with the subcontractor (ASM Research Inc.), we were informed that they extract marital and dependent data from the Defense Enrollment and Eligibility Reporting System for R&K Engineering to use in calculating barracks requirements. The data extracted and calculation process has not changed. The subcontractor provides R&K Engineering with marital and dependency status of soldiers assigned to an installation who are identified by the installation's zip code rather than a 40-mile radius. The subcontractors data reports soldiers as single without dependents, single, military married to military and married. A single soldier without dependents is identified in the Defense Enrollment and Eligibility Reporting System as: never married, divorced, or with an annulled marriage. A single soldier is identified as divorced or whose marriage has been annulled and has a dependent. A soldier identified as married to another service member is reported as military married to military. Finally, a soldier identified as married with a dependent is reported as married. In the case of a single soldier with dependents, there is currently no differentiation made as to whether the soldier is with or without custody of the dependent. The total number of soldiers by grade for each of the four marital status categories are provided to R&K Engineering for the bachelor factor calculation used to compute barracks requirements. The marital data currently provided by the subcontractor understates the computation of single soldiers because a single soldier with a dependent is considered married regardless of whether the soldier has custody of the dependent. If a soldier is no longer married, has a court order to pay child support, and does not have custody of the dependent, then the soldier is entitled to a barracks space and should be considered as single when computing a bachelor requirement. For example, the 50.12 percent bachelor factor the Army calculated for the pay grade E-1 to E-4



## **Barracks Requirements for Unaccompanied Permanent Party Enlisted Personnel**

located at Fort Lewis included 546 single soldiers with dependents as married when the status of the custody of the dependent was not known. We found that using Defense Finance and Accounting Service's closest dependent for basic allowance for quarters codes is an accurate identifying method of whether a soldier reported as having a dependent has custody, in addition to determining the marital status of all soldiers used to calculate a bachelor factor. Failure to recognize single soldiers without dependents in their custody understates the bachelor factor requirements determination process.

Since the Army uses the same data and process to compute barracks requirements for all Army installations, we believe our observation of Fort Lewis is representative Army wide. Therefore, we request that the Assistant Chief of Staff for Installation Management reconsider the Army position on Recommendations 1 through 4 and provide additional comments in response to the final report.

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## **Part II - Additional Information**

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## **Appendix A. Audit Process**

### **Scope**

We reviewed the process and supporting documentation used to develop the unaccompanied enlisted personnel housing requirements for Fort Lewis. We limited the scope of the audit to personnel housing requirements for unaccompanied permanent party enlisted personnel. Also, the scope of the audit is limited in that we did not review the management control program. The management control program will be discussed in a separate summary report.

### **Methodology**

We performed the audit using DoD and Army guidance for developing barracks requirements. We relied on computer-processed data when reviewing the Army Stationing and Installation Plan, November 15, 1996 data for future manpower estimates used in the requirements determination process. The organization's data was uniformly produced and verified. We reviewed data adjustments and determined the data to be adequate and reliable.

**Audit Period, Dates, and Standards.** This economy and efficiency audit was made from March 1997 through January 1998 in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD.

**Contacts During the Audit.** We visited or contacted individuals and organizations within the DoD. Further details are available on request.

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## **Appendix B. Summary of Prior Coverage**

### **Inspector General, DoD**

Inspector General, DoD Report No. 97-142, "Unaccompanied Enlisted Personnel Housing Requirements for Marine Corps Base Camp Pendleton, California," May 9, 1997 states that Marine Corps Base Camp Pendleton overestimated the number of unaccompanied permanent party enlisted personnel requiring barracks by 5,184 spaces. The overestimate occurred because guidance for barracks requirements did not specify removing ineligible Marines from personnel data used to compute barracks requirements. The report recommended that the Commandant of the Marine Corps revise guidance for computing barracks requirements to require that transient, deployed, and enlisted personnel in grades E-6 and above residing in the local community be excluded from personnel strength data used to determine permanent party barracks requirements. Also recommended was that the Commanding General, Marine Corps Base Camp Pendleton remove transient personnel, deployed personnel on a rotational cycle, and personnel in grades E-6 and above residing in the local community from permanent party personnel data used in determining barracks requirements. The Marine Corps agreed with the recommendations to revise guidance for computing barracks requirements and to remove transient personnel, deployed personnel and E-6 personnel residing in the community from data used to determine permanent party barracks requirements.

Inspector General, DoD Report No. 98-003, "Unaccompanied Enlisted Personnel Housing Requirements for Marine Corps Base Camp Lejeune, North Carolina," October 3, 1997 states that Marine Corps Base Camp Lejeune overestimated the number of unaccompanied permanent party enlisted personnel requiring barracks by 6,591 spaces. The overestimate occurred because guidance for barracks requirements did not specify removing ineligible Marines from personnel data used to compute barracks requirements. The report recommended that the Commandant of the Marine Corps revise guidance for computing barracks requirements to require that transient, deployed, and student personnel whose training is less than 20 weeks be excluded from personnel strength data used to determine permanent party barracks requirements. Also recommended was that the Commanding General, Marine Corps Base Camp Lejeune remove transient personnel, deployed personnel on a rotational cycle, and student personnel whose training is less than 20 weeks from permanent party personnel data used in determining barracks requirements. The Marine Corps agreed with the recommendations to revise guidance for computing barracks requirements and to remove transient personnel, deployed personnel and student personnel whose training is less than 20 weeks from data used to determine permanent party barracks requirements. The scheduled completion date from reissuing Marine Corps guidance for determining barracks requirements was November 30, 1997.

## **Army Audit Agency**

U.S. Army Audit Agency Report No. AA 98-59 "Unaccompanied Enlisted Personnel Housing Program," December 29, 1997 states that the Army overstated its barracks requirements for permanent party soldiers in CONUS by about 7,200 spaces at an estimated cost of \$217.7 million. The overestimate occurred because the database used to compute "bachelor factors" for permanent party soldiers included: trainees and students in advanced individual training (AIT), non-Army Service members not housed at Army installations, and students attending AIT whose course of instruction was 20 weeks or longer. Although, these students were authorized permanent change of station entitlements and qualified as permanent party personnel; however, they were still receiving entry-level training and should be excluded from the Army's determination requirement for the "one-plus-one" design standard criterion. The report recommended that the Army recompute barracks requirements for permanent party soldiers, with the necessary adjustments for trainees and students (including students attending AIT instructions 20 weeks or more), soldiers in grade E-6 who are housed off post from the calculations of soldiers adequately housed off post and enlisted personnel housed off post because of barracks renovation. Also, the Army should ensure that the "bachelor factor" used in the computation is based only on enlisted soldiers assigned to the units at the installation, and include trainees and students. The Army Assistant Chief of Staff for Installation Management concurred with all the recommendations.

U.S. Army Audit Agency Report No. AA 97-97, "Space Utilization, U.S. Army Infantry Center and Fort Benning, Fort Benning, Georgia," January 6, 1997 found that new construction requirements for barracks to house permanent party soldiers were overstated. Fort Benning overstated barracks requirements for the Ranger regiment by 174 spaces at an estimated cost of \$6.9 million because it included single soldiers with dependents in the requirements determination process (computations). The report recommended that the command recalculate barracks requirements for permanent party soldiers, excluding single soldiers with dependents from the calculations and to obtain the projected strength figures from the most current ASIP. Also, the command to reduce the requirement for construction of permanent party barracks in the installations master plan to accurately reflect the shortage of adequate barrack space, revise the FY 97 barracks construction project for the Ranger regiment and delete the excess requirements is included in the project justification. The Command concurred with all the recommendations.

U.S. Army Audit Agency Report No. AA 96-218, "Audit of Barracks Requirements, U.S. Army Signal Center and Fort Gordon, Fort Gordon, Georgia," June 14, 1996 found that barracks requirements for permanent party soldiers at Fort Gordon were significantly overstated. Fort Gordon overstated barracks requirements because it incorrectly computed the number of unaccompanied enlisted soldiers authorized barracks space. Specifically, single soldiers with dependents were counted as bachelors and included in the computation of barracks requirements. By overstating requirements, Fort Gordon incorrectly concluded that there was a shortage of adequate barracks space for its permanent party soldiers, and needed to build a 300-person barracks during FY 1998 at an estimated cost of \$17.5 million. The report recommended that the

command cancel construction of the 300-person barracks project. The Army nonconcurred with the recommendation and stated that a deficit still exists to support the 300-person barracks because of the new "1+1" construction standard. However, the Army agreed to reevaluate barracks requirements because of the new construction standard and have the results validated. Army Audit considered the comments to be responsive.

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## **Appendix C. Background for the Barracks Replacement Program**

### **New Design and Construction of Barracks Housing**

On November 6, 1995, Secretary of Defense Memorandum "Design and Construction of Unaccompanied Enlisted Personnel Housing (Barracks)," established a maximum allowable area per occupant for new, permanent barracks construction. The memorandum complies with United States Code, Title 10, Section 2856 to establish a new standard design criterion for future permanent party barracks construction. The standard for new construction does not apply to barracks constructed for transients, recruits, or members receiving entry-level skill training. The standard for new construction is optional for barracks outside CONUS funded by other than the United States or constrained by site conditions, and for barracks to house other than the full-time active duty Service members.

New barracks construction will be based on a module consisting of two individual living/sleeping rooms with closets and a shared bath and service area. The standard for new construction is referred to as "1 + 1." Designs should be developed to produce 11m<sup>2</sup> (118 square feet) of net living area per living/sleeping room, measured from the inside face of the walls to include all clear floor areas.

The standard for new construction is to be implemented as soon as practical, taking into consideration that barracks projects are at various stages of design and construction. The standard for new construction may be waived by the Secretary of a Military Department under the following circumstances:

- wherever the Secretary determines that unique mission requirements or operational commitments are better served by congregated living (for example, Seal Teams, Force Reconnaissance Marines, Special Forces), and
- wherever the Secretary determines that the collective quality of life for members of a Military Department would be enhanced by a lesser construction standard, but providing new quarters to a larger number of members.

Existing barracks will not be considered inadequate for assignment because of the new construction standard. The Secretary challenged each Military Department to implement the new standard as part of an integrated barracks plan that considers optimal use of existing adequate quarters, renovation of those that can be made adequate through traditional military construction, and innovative use of private sector solutions.

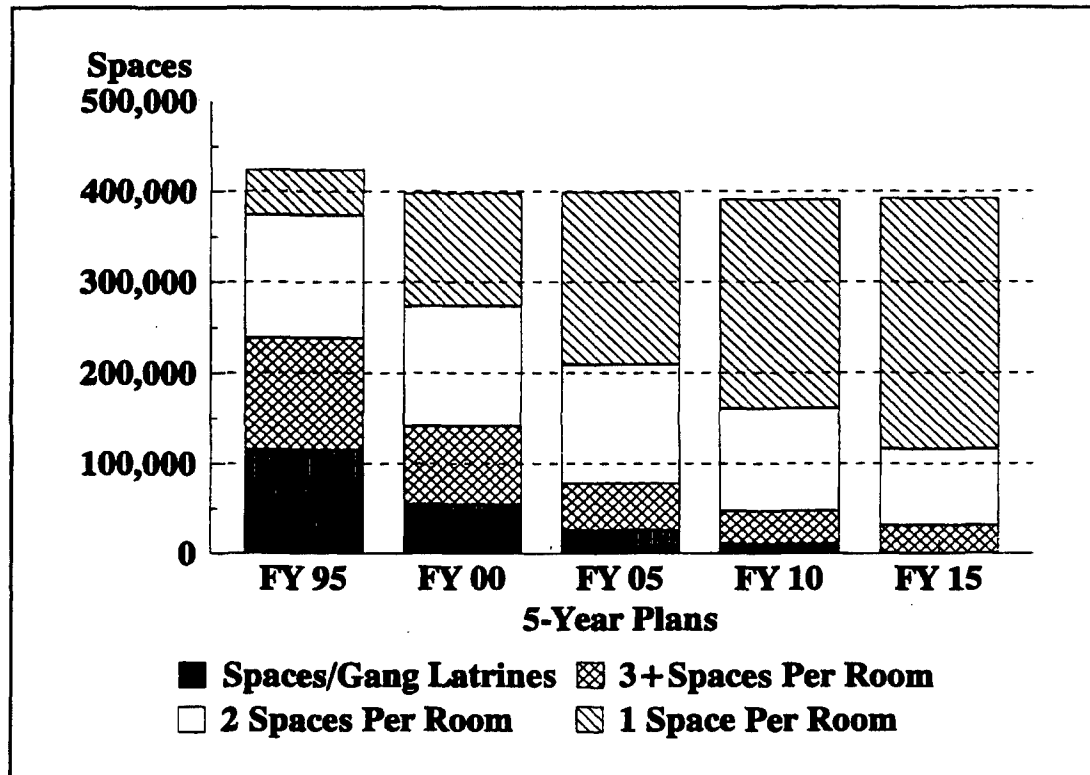
### **Implementation Plans**

Each of the Military Departments submitted a plan to the Secretary of Defense to implement the new construction standard service wide. The plans contain each



## Appendix C. Background for the Barracks Replacement Program

Military Department's projected number of permanent party space requirements, existing permanent party barracks configuration, resources required and projected schedules for converting existing barracks to the new 1 + 1 construction standard. The following figure shows the collective impact of these plans over a 20-year period. During that period, the number of spaces served by gang latrines would be reduced from 115,520 to 700. Spaces occupied by three or more persons would decline from 123,316 to 30,978.



## Appendix C. Background for the Barracks Replacement Program

### Composite Barracks Configuration

The table below provides data regarding the Military Department's estimated barracks requirements, funding required to convert existing barracks to the new construction standard, and the timelines for completing the conversions.

Military Department Barracks Implementation Plans						
Military Department	End State Reached	Total Permanent Required	Resources Required (\$ in millions)			
			MILCON	O&M	Other <sup>1</sup>	Total
Army	2020	199,000	\$6,480	\$1,710	\$1,295	\$ 9,485
Navy	2013	144,100	2,035	325	299	2,659
Air Force	2019	115,710	799	320	481	1,600
Marine Corps	2035	97,834	1,125	300	270	1,695
Total		556,644	\$10,439	\$2,655	\$2,345	\$15,439

<sup>1</sup>The Other category is anticipated foreign government investments (Payment-In-Program, Republic of Korea Program, and Japanese Facilities Improvement Program).

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## Appendix D. Listing of Basic Allowance for Quarters (BAQ) Dependent Codes

The following table provides the BAQ dependent codes and a description of each code showing relationship that entitles the member to the housing allowance.

<b>BAQ Dependent Code</b>	<b>Description</b>
A	Spouse
B	Child in legal custody of someone else
C	Child in member's custody
D	Parent
F	Stepchild
G	Grandfather clause (court ordered dependent prior to December 5, 1991); child in legal custody of some one else
I	Member married to member (own right - BAQ without rate)
K	Ward of the court
L	Parent-in-law
R	Own right (BAQ without rate)
S	Student (child over 21 years of age attending accredited college)
T	Handicap (Incapacitated child over 21 years of age)
W	Member married to member with a dependent child
X	Custodial parent receiving child support whose divorce decree or written agreement is dated between August 1, 1991 and June 30, 1992

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## **Appendix E. Report Distribution**

### **Office of the Secretary of Defense**

Under Secretary of Defense for Acquisition and Technology  
Deputy Under Secretary of Defense (Industrial Affairs and Installations)  
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Senate Committee on Governmental Affairs  
House Committee on Appropriations  
House Subcommittee on National Security, Committee on Appropriations  
House Committee on Government Reform and Oversight  
House Subcommittee on Government Management, Information, and Technology,  
Committee on Government Reform and Oversight  
House Subcommittee on National Security, International Affairs, and Criminal Justice,  
Committee on Government Reform and Oversight  
House Committee on National Security

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## **Part III - Management Comments**

# Department of the Army Comments



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT  
800 ARMY PENTAGON  
WASHINGTON DC 20310-0000



DAIM-FDH

APR 27 1998

MEMORANDUM THRU ~~Director of the Army Staff~~

~~CHARLES R. INGERSOLL, LTC, GS, DE-00~~

~~Deputy Assistant Secretary of the Army  
(Installation and Housing)  
GMSA (I, L&S)~~

~~Deputy Assistant Secretary of the Army (I&H)~~

28 APR 1998

FOR Inspector General Department of Defense, ATTN: Mr. Gary Padgett  
(CMD), 400 Army Navy Drive, Room 801, Arlington, VA 22202-2884

SUBJECT: Draft Report, Unaccompanied Enlisted Personnel Housing  
Requirements For Fort Lewis, Washington

1. Reference, Project No. 6CG-0072.07, dated 17 February 1998, SAB.
2. Enclosed find our response to the DoD IG audit results in subject report. We do not agree with your recommendation to change from the Defense Eligibility Enrollment Reporting System (DEERS) database to the Defense Finance and Accounting Service (DFAS) database for the determination of barracks requirements. Rationale for this position is explained in more detailed in the attached response.
3. The point of contact for this action is Mrs. Birgitt Seymour, (703) 428-7511.

Encl  
as

DAVID A. WHALEY  
Major General, GS/  
Assistant Chief of Staff  
for Installation Management



Assistant Chief of Staff for Installation Management Reply  
Project No. 6CG-0072.07, February 17, 1998  
Unaccompanied Enlisted Personnel Housing Requirements

**AUDIT OBJECTIVE** – The overall audit objective was to determine the validity of requirements estimates for DoD unaccompanied personnel housing. This report provides the results of the audit of unaccompanied enlisted personnel housing requirements at Fort Lewis.

**AUDIT RESULTS** – The Army underestimated Fort Lewis requirement for unaccompanied permanent party enlisted personnel by 471 barracks spaces. As a result, future construction costs for Fort Lewis have been understated by \$31.6 million for their barracks replacement program.

**SUMMARY OF RECOMMENDATIONS** – We recommend that the Army Assistant Chief of Staff for Installation Management recompute permanent party barracks requirements for Fort Lewis. Specifically, in computing the requirements, the Army should use closest dependent for basic allowance for quarters codes (BAQ dependent codes) to compute bachelor factors. We also recommend the use of BAQ dependent codes to compute bachelor factor percentages that are used in the requirements determination process for all Army installations. We further recommend that the Army request the Defense Finance and Accounting Service, Indianapolis provide BAQ dependent codes for all Army personnel from monthly payroll data that is provided to the Defense Manpower Data Center. Finally, we recommend that the Army obtain BAQ dependent codes from the Defense Manpower Data Center for computing bachelor factor percentages for Army installations.

**ACTION TAKEN** – Non-Concur

- ♦ The report does not present a convincing argument in favor of the recommendation to use DFAS in lieu of DEERS for the computation of unaccompanied requirements. The only problem stated with DEERS was that it included all service members within a 40 mile radius (catchment areas). The DoDIG report should mention the fact that the Army was aware of this condition and planned corrective action. This should be adequately disclosed in the report. Before their visit to Fort Lewis, a draft of the AAA audit report (final report AA 98-59, 29 December 1997), identifying this condition, was provided to the DoDIG. Since then, the contractor responsible for computing barracks requirements for permanent party soldiers (R&K Engineering) has revised computation of determination data. The revised data is currently used in the FY00-05 POM build.

## Department of the Army Comments

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- ♦ The report does not discuss comparing DFAS data to "purified" DEERS data, which the Army is now using. The discussion against using DEERS is based solely on the Mar 96 DEERS data (which included personnel within a 40 mile radius).
- ♦ On a technical point, there is no mention of the date of the DFAS data used in computing the requirement. If different timeframes were involved, the validity of the comparison may be inconclusive.
- ♦ In addition, it is arguable that the scope of the audit, one installation, provides an adequate basis for the conclusion and recommendation to change the entire methodology.

## **Audit Team Members**

This report was prepared by the Contract Management Directorate, Office of the Assistant Inspector General for Auditing, DoD.

Paul J. Granetto  
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## INTERNET DOCUMENT INFORMATION FORM

**A . Report Title:** Unaccompanied Enlisted Personnel Housing Requirements for Fort Lewis, Washington

**B. DATE Report Downloaded From the Internet:** 09/15/99

**C. Report's Point of Contact: (Name, Organization, Address, Office Symbol, & Ph #):** OAIG-AUD (ATTN: AFTS Audit Suggestions)  
Inspector General, Department of Defense  
400 Army Navy Drive (Room 801)  
Arlington, VA 22202-2884

**D. Currently Applicable Classification Level:** Unclassified

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